STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0119466; AI 119697; PER20040001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Tangipahoa Parish Sewer District No. 1
Northwest Hammond Treatment Facility
15481 Club Deluxe Road
Hammond, LA 70403

II. **PREPARED BY:** Angela Marse

DATE PREPARED: May 17, 2006

III. **PERMIT ACTION:** LPDES permit LA0119466, AI 119697; PER20040001

LPDES application received: February 19, 2003

LPDES permit issued: none issued

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving northwest Hammond.

B. The permit application does not indicate the receipt of industrial wastewater.

C. The facility is located off Randall Road, just north of the Ward Line Road and I-55 Interchange in Hammond, Tangipahoa Parish.

D. The treatment facility consists of an aerated lagoon with high rate clarifiers, followed by a tertiary wetland. Disinfection is by chlorination.

E. Outfall 001

Discharge Location: Latitude 30° 31' 36" North
Longitude 90° 30' 16" West

Description: treated sanitary wastewater

Design capacity: 0.3 MGD

Type of Flow Measurement which the facility is currently using:

V-Notch Weir

V. RECEIVING WATERS:

The discharge is into a parish drainage ditch, thence into Yellow Water River, thence into Lake Maurepas in segment 040504 of the Lake Ponchartrain Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 040504 of the Lake Ponchartrain Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment	Degree of Support of Each Use						
Not Supported	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	N/A

[1/]The designated uses and degree of support for Segment 040504 of the Lake Ponchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

Section 303(d) of the Federal Clean Water Act requires states to identify waterbodies that are not meeting water quality standards and to develop total maximum daily pollutant loads for those waterbodies. A pollutant is any substance introduced into the waters of the state by any means that would tend to degrade or impair the chemical, physical, biological, or radiological integrity of such environment. Segment 040504 of the Lake Pontchartrain Basin is on the 303(d) list of impaired waters. The suspected causes of impairment were organic enrichment/low DO, pathogen indicators, TDS, and phosphorus. Section 303(d) of the Federal Clean Water Act further requires that states develop TMDL (Total Maximum Daily Load) Management Plans for waterbodies determined to be water quality limited. To date no TMDLs have been completed for this waterbody.

Subsegment 040504, is defined in the regulations as Yellow Water River from its origin to Ponchatoula Creek. The discharge, according to the coordinates provided in the application, travels approximately 4.66 miles through parish drainage prior to entering Yellow Water River. In accordance with the Pre-TMDL Permitting Strategy, new or expanding discharges in excess of 100,000 gallons per day should either have an appropriate water quality simulation model run or appropriate effluent limitations that prevent impact on the impaired stream through end-of-pipe water quality limitations. Therefore, suspected causes of impairment attributed to sanitary wastewater are addressed through end-of-pipe water quality limitations.

A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements if required by a TMDL.

Organic enrichment/low DO

$CBOD_5$ and dissolved oxygen (DO) effluent limits are included in the permit. This is consistent with LDEQ's Pre-TMDL Permitting Strategy discussed in IX. Proposed Permit Limits. $CBOD_5$ is used as a method to measure the amount of dissolved oxygen in the waste stream utilized by organisms during the decomposition of organic material over a five day period when ammonia-nitrogen is a requirement of the permit. Monitoring for $CBOD_5$ allows for the determination of the rate of oxidation in the wastestream.

LDEQ's declaratory ruling (April 29, 1996) stated "DO is a direct correlate with overall nutrient impact is a well-established biological and ecological principle. Thus, when the LDEQ maintains and protects DO, the LDEQ is in effect also limiting and controlling nutrient concentrations and impacts." Through a $CBOD_5$ and DO limit, LDEQ is controlling nitrogen and phosphorus. (Phosphorus is a suspected cause of impairment.)

Pathogen indicators

Monitoring for fecal coliform colonies is the best indicator for the potential presence of pathogenic organisms in wastewater. To protect against the development of pathogenic organisms in the receiving waterbodies, fecal coliform limits have been established in the permit.

Phosphorus

Phosphorus is a nutrient like nitrogen. It uses up dissolved oxygen needed to support aquatic life. A TMDL will be done to address the phosphorus impairment in Segment 040504. As indicated in the table on the previous page, this subsegment does not support the propagation of fish and wildlife.

LDEQ's water quality standards read "The naturally occurring range of nitrogen-phosphorus ratios shall be maintained. To establish the appropriate range of ratios and compensate for natural seasonal fluctuations, the administrative authority will use site-specific studies to establish limits for nutrients. Nutrient concentrations that produce aquatic growth to the extent that it creates a public nuisance or interferes with designated water uses shall not be added to any surface water." To ensure the nitrogen-phosphorus ratio is maintained, ammonia-nitrogen is limited in the permit.

Total Dissolved Solids (TDS)

As per LAC 33.IX.1123.Table 3 Numerical Criteria and Designated Uses, numerical criteria for TDS in segment 040504 is 150 mg/l. Limiting TDS in the permit at 150 mg/l Daily Maximum, will prevent impacts on the impaired stream until a TMDL can be completed. This is also consistent with the Pre-TMDL Permitting Strategy and approved by TMDL personnel.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 040504 of the Lake Ponchartrain Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish & Wildlife Service (FWS). This strategy was submitted with a letter dated October 21, 2005 from Watson (FWS) to Gautreaux (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit I not likely to have an adverse effect on any endangered species or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

In 2004, the discharge was a proposed facility designed to incorporate several smaller ones. LDEQ consulted with the State Historic Preservation Officer (SHPO) in a letter dated February 26, 2004 to determine whether construction-related activities could potentially affect sites or properties on or eligible for listing on the National Register of Historic Places. SHPO's response letter, dated March 24, 2004, stated that the facility as proposed will have no potential effects.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mrs Angela Marse
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

OUTFALL 001

The facility is a new discharger into an impaired stream not meeting any of its designated uses. According to LDEQ's Pre-TMDL Permitting Strategy, new or expanding discharges in excess of 100,000 gallons per day should have appropriate effluent limitations that prevent impact on the impaired stream. In most cases, facility discharges should be evaluated using an appropriate water quality simulation model. Alternatively, the facility can be permitted using end-of-pipe water quality based effluent limitations or an approved effluent trading program. Since LDEQ doe not have an effluent trading program, typically end-of-pipe water quality based effluent limitations would be 5mg/l $CBOD_5$, 2mg/l ammonia-nitrogen, and 5 mg/l dissolved oxygen. However, the Pre-TMDL Permitting Strategy does make allowance for other factors including discharge distance from the 303(d) stream. The discharge travels approximately 4.66 miles through Parish drainage before entering Yellow Water River. For this reason, effluent limits of 10 mg/l $CBOD_5$, 5mg/l ammonia-nitrogen, and 5 mg/l dissolved oxygen are proposed in the permit. Total dissolved solids (TDS) are also limited at 150mg/l based on stream impairment and water quality standards. A three-year compliance schedule will be included in the permit to allow the permittee time to achieve compliance with the ammonia-nitrogen, dissolved oxygen limit, and TDS. TMDLs for the Lake Pontchartrain Basin are scheduled for completion in 2011. The permittee should be aware that more stringent effluent limitations may be required as a result of these studies and the facility should contact the Department before any changes are made to the system.

Interim Effluent Limits:

Interim limits shall become effective the effective date of the permit and expire three years from the effective date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	25	10 mg/l	15 mg/l	BPJ based on LDEQ's Pre-TMDL Permitting Strategy and distance of discharge from the impaired waterbody.
TSS	38	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
TDS	---	---	150 mg/l	BPJ based on Water Quality Standards at LAC 33:IX.1123. Table 3. Numerical Criteria.
Ammonia-Nitrogen	Report	Report mg/l	Report mg/l	BPJ based on receiving stream impairments.
Dissolved Oxygen	---	Report mg/l	---	BPJ based on receiving stream impairments.

**This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgment in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) **pH**

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

Final Effluent Limits:

Final limits shall become effective three years from the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	25	10 mg/l	15 mg/l	BPJ based on LDEQ's Pre-TMDL Permitting Strategy and receiving stream impairments.
TSS	38	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
TDS	---	---	150 mg/l	BPJ based on Water Quality Standards at LAC 33:IX.1123. Table 3. Numerical Criteria.
Ammonia-Nitrogen	12.5	5 mg/l	10 mg/l	BPJ based on LDEQ's Pre-TMDL Permitting Strategy and receiving stream impairments.
Dissolved Oxygen	---	5 mg/l	---	BPJ based on Water Quality Standards found in LAC 33.PART IX, Subpart 1, Table 3.

**This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgment in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0119466: None issued

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following most recent inspection was performed during for this facility.

Date - January 6, 2006
Inspector - LDEQ
Findings and/or Violations -

1. Inspection was in response to a complaint. A nearby resident claimed sewage was being discharged on his property.
2. The facility had no permit, only a complete application on file.
3. Levee system appeared weak.
4. Greenish water was observed at the discharge point and adjacent ditch.
5. Samples were taken. BOD_5 was 17 mg/l and 18 mg/l. TSS was 118 mg/l and 125 mg/l.

B) Compliance and/or Administrative Orders

A review of the files indicates the following most recent enforcement actions administered against this facility:

LDEQ Issuance:

Docket # - WE-C-06-0019
Date Issued – March 16, 2006
Findings of Fact:

1. Respondent discharged stormwater during the construction of the plant without a permit.
2. Respondent discharge treated sanitary wastewater with out a permit.
3. During an inspection January 6, 2006, the facility was discharging with out a permit and samples were collected at the site.

Order:

1. To comply with the following interim effluent limitations:

	Daily Avg.	Daily Max.
BOD_5	10 mg/l	15 mg/l
TSS	15 mg/l	23 mg/l
Fecal Coliform	200	400

pH range 6-9 standard units.
2. Increased monitoring frequency is required for any violations. DMRs shall be submitted no later than the 28th of the month for the previous month.
3. To submit with thirty (30) days report detailing circumstances of the violations.
4. To notify the Department within 15 days of issuance of a final permit.

C) DMR Review

The facility has no DMRs on record.

XII. ADDITIONAL INFORMATION:

Please be aware that the Department will be conducting a TMDL in the Lake Ponchartrain Basin scheduled for completion in 2011. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.3 MGD.

Effluent loadings are calculated using the following example:

BOD: 8.34 lb/gal x 0.3 MGD x 10 mg/l = 25 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.1 and 0.5 MGD.

Effluent Characteristics	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow	Continuous	Recorder
$CBOD_5$	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Dissolved Oxygen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

Permit limits are proposed for ammonia-nitrogen and dissolved oxygen are based upon the LDEQ's Pre-TMDL Permitting Strategy and receiving water impairments. In order for the permittee to comply with these permit limits, a compliance schedule is proposed. The permittee shall achieve compliance with the FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS as specified in accordance with the following schedule:

ACTIVITY	DATE
Achieve Final Effluent Limitations and Monitoring Requirements	Three years from the effective date of the permit.

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, standard pretreatment language has been included in the permit.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Tangipahoa Parish Sewer District No. 1,Northwest Hammond Treatment Facility, February 19, 2003.